

Chronotaxy: Time to Update Your Dictionaries

Abstract

Chronotaxy is a new term denoting the ordered phase-structure of time—the field of temporal arrangement that keeps sequences coherent and synchronizes dynamics across scales. In the Resonant Mechanics framework, space and time are two gauges of the same substrate; chronotaxy names the substrate’s time-order aspect, distinct from simple clock rate.

Definition

Chronotaxy (*n.*) — The coherent phase-lattice of time that organizes before/after relations, aligns processes across distances, and enables stable causality. Smooth chronotaxy corresponds to laminar temporal flow; stress or dephasing in chronotaxy yields local ordering failures (e.g., phase slips, dilation asymmetries).

Chronotactic (*adj.*) — Pertaining to, preserving, or describing the structure and coherence of chronotaxy (e.g., “chronotactic coherence,” “chronotactic flow”).

Adverb: chronotactically (*adv.*) — “aligned chronotactically,” “chronotactically stable.”

Etymology:

Chronotaxy ← Greek **chrónos** (χρόνος, “time”) + **táxis** (τάξις, “order; arrangement”).

Chronotactic ← Greek **taktikós** (τακτικός, “pertaining to arrangement/ordering”), from **tássein/táttein** (τάσσειν/τάττειν, “to arrange; to set in order”).

Motivation

Existing language treats time as a parameter or metric. Resonant Mechanics requires a term for time-as-structure: the medium that sequences events and couples them to spatial geometry. Chronotaxy fills this gap without importing assumptions from classical or quantum formalisms.

Relation to Space and the “3+3” View

In this model, the three spatial axes are visible projections of three orthogonal time-flows embedded in the same substrate. Distance is accumulated phase advance; duration is local rephasing rate. Chronotaxy names the common ordering that unites both views.

Minimal Usage Guide

Noun: “The chronotaxy of this region is laminar.”

Adjective: “Chronotactic coherence remained high during the run.”

Diagnostic phrase: “Chronotaxy change-point” (a detected shift in time-order structure).

Illustrative Examples

Interferometry: Stable fringes imply high chronotactic coherence along both arms.

Astrophysical timing: Consistent pulsar phase across baselines indicates laminar chronotaxy along those sightlines.

Condensed systems: Long-lived superconducting phase order reflects strong coupling to a coherent local chronotaxy.

Glossary Snapshot

Chronotaxy: Time-order field (the phase lattice of time).

Chronotactic: Pertaining to the structure or coherence of chronotaxy; describing flows, processes, or constraints that preserve laminar time-order (adv. chronotactically).

Chronoshear: Local stress in the time-order field that can precipitate dephasing.

Laminar temporal flow: Smooth, low-shear chronotaxy enabling stable sequencing and synchronization.

Conclusion

Chronotaxy is the missing word for time as an ordered field—how the universe keeps its own beat so that space, motion, and causality remain in step.